

1 13. (New) A computerized method for use in simulating an operation of an electronic sys-
2 tem, said method being carried out using a computer system, said method comprising the
3 steps of:

4 dividing a representation of a system presented on a user interface into a first portion
5 of said system and a second portion of said system;

6 generating, in response to said dividing, a physically-accurate description of said first
7 portion of said system, said physically-accurate description comprising actual physical char-
8 acteristics of said first portion;

9 generating, in response to said dividing, an approximate mathematical model of said
10 second portion of said system, said model being based upon hierarchical analysis of said re-
11 maining portion; and

12 using both said physically-accurate description and said approximate model to simu-
13 late the operation of said system.

1 14. (New) A computerized system for use in simulating an operation of an electronic system,
2 comprising:

3 a user interface to divide said system into a first part and a second part;

4 a modeling engine, responsive to dividing said system into said first part and said

5 second part, that first models said first part of said system by a physically accurate descrip-

6 tion of said first part of said electronic system to produce a first model, said modeling engine
7 secondly developing a second model of said second part of said electronic system by includ-
8 ing only hierarchical analysis approximate mathematical functions estimating operation of
9 said second part of said electronic system; and
10 a simulation engine that simulates the operation of said electronic system based upon
11 both said first model of said physically accurate description and said second model of said
12 hierarchical analysis approximate mathematical functions.

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1 15. (New) A computer-readable memory containing computer-executable program instruc-
2 tions comprising instructions for:

3 dividing a representation of a system presented on a user interface into a first portion
4 of said system and a second portion of said system;

5 generating, in response to said dividing, a physically-accurate description of said first
6 portion of said system, said physically-accurate description comprising actual physical char-
7 acteristics of said first portion;

8 generating, in response to said dividing, an approximate mathematical model of said
9 second portion of said system, said model being based upon hierarchical analysis of said re-
10 maining portion; and

11 using both said physically-accurate description and said approximate model to simu-
12 late the operation of said system.

1 16. (New) A computerized system for use in simulating an operation of an electronic system,
2 comprising:

3 means for generating a physically-accurate description of said first portion of said
4 system, said physically-accurate description comprising actual physical characteristics of said
5 first portion;

6 means for generating an approximate mathematical model of said second portion of
7 said system, said model being based upon hierarchical analysis of said remaining portion;

8 and

9 means for using both said physically-accurate description and said approximate
10 model to simulate the operation of said system.

1 17. (New) A computerized system for use in simulating an operation of an electronic system,
2 comprising:

3 means for dividing a representation of a system presented on a user interface into a
4 first portion of said system and a second portion of said system;

5 means for generating, in response to said dividing, a physically-accurate description
6 of said first portion of said system, said physically-accurate description comprising actual